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09/987,345	11/14/2001	Takeshi Konno	107443-00014	6928

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SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER	
FONTAINE, MONICA A	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/987,345	KONNO, TAKESHI	
	Examiner	Art Unit	
	Monica A Fontaine	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *021904*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

This is responsive to the Amendment filed 26 April 2004.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a synchronization ratio relative to a backward speed V of a screw, does not reasonably provide enablement for a synchronization ratio relative to a constant backward speed V of a screw. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to carry out the invention commensurate in scope with these claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Imatomi et al. (U.S. Patent 6,321,940). Imatomi et al., hereafter "Imatomi," show that it is known to carry out a

method for controlling an injection molding machine having a screw arranged within a heating cylinder to be rotatable and to be linearly movable and having a flight with a pitch, the molten resin being moved in a forward feeding direction during a plasticization process and an injection process (Column 5, lines 50-67 – Column 6, lines 31). Furthermore, Imatomi shows a method comprising the step of linearly moving the screw backwards relative to the forward feeding direction of the molten resin at a speed and simultaneously rotating the screw in the forward feeding direction at a rotation speed, after completion of the plasticization process or the injection process (Column 6, lines 20-31). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made for Imatomi's screw to retract at a constant linear speed due to the constant rotation of the screw and calculated movement of molten resin.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al., hereafter "Shimizu," in view of Yamazaki (U.S. Patent 4,540,359).

Regarding Claim 1, Shimizu shows the basic process, including controlling an injection molding machine including a heating cylinder and a screw disposed in the heating cylinder (Column 3, lines 46-47), performing a plasticization/measuring process and an injection process (Column 2, lines 60), defining a synchronization ratio of a rotation speed of the screw, so that the position of a flight of the screw does not apparently move relative to a constant speed of the screw (Figures 3-5; Column 2, lines 58-65), and defining a rotation speed of the screw by dividing the backward speed of the screw by the pitch of the flight of the screw (Column 2, lines 44-57). The examiner notes that a specific "synchronization ratio" is not explicitly defined in

Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized. The examiner also notes that Shimizu does not explicitly define an arbitrary synchronization ratio, as used in the claimed formula. However, since the arbitrary synchronization ratio cannot alter how the process steps are to be performed to achieve the utility of the invention, it is herein addressed as nonfunctional descriptive material (MPEP 2106 VI.). Shimizu does not show moving the screw backwards while rotating it after completion of the measuring process or the injection process. Yamazaki shows that it is known to retract the screw while rotating it (Column 6, lines 29-33). Yamazaki and Shimizu are combinable because they are concerned with a similar technical field, namely, that of injection molding processes having a heated cylinder and a movable screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the screw backwards after an injection process, as in Yamazaki, in Shimizu's molding process in order to melt and measure the material more efficiently.

Regarding Claim 2, Shimizu shows the basic process as claimed as discussed above, however Shimizu does not explicitly show varations of the synchronization of the screw rotation and linear movement. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary Shimizu's synchronization ratio of the screw's rotation speed and linear speed

during his molding process in order to achieve better measuring and melting of the material therein.

Regarding Claim 3, Shimizu shows the basic process as claimed, including a process using a heating cylinder, a screw disposed in a heating cylinder (Column 3, lines 46-47), a first driving source for driving the screw in an axial direction, a second driving source for rotating the screw (Column 4, lines 1-5, 18-27), position detecting means for detecting the axial position of the screw (Column 5, lines 42-51), rotation-speed detecting means for detecting the rotation speed of the screw (Column 4, lines 49-54), and a controller for controlling the first driving source and the second driving source dependent on the detecting signals transmitted from the position detecting means (Column 5, lines 47-51) and the rotation-speed detecting means (Column 4, 60-65). Shimizu also shows a plasticization/measuring process and an injection process (Column 2, lines 60), comprising the steps of, defining a synchronization ratio of a rotation speed of the screw, so that the position of a flight of the screw does not apparently move relative to a constant speed of the screw (Figures 3-5; Column 2, lines 58-65), and defining a rotation speed of the screw by dividing the backward speed of the screw by the pitch of the flight of the screw (Column 2, lines 44-57). The examiner notes that a specific "synchronization ratio" is not explicitly defined in Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized. The examiner also notes that Shimizu does not explicitly define an arbitrary sychronization ratio, as used in the claimed formula. However, since the arbitrary sychronization ratio cannot alter how the process steps are to be performed to achieve the utility of the invention, it is herein addressed as nonfunctional descriptive material

(MPEP 2106 VI.). Shimizu does not show moving the screw backwards while rotating it after completion of the measuring process or the injection process. Yamazaki shows that it is known to retract the screw while rotating it (Column 6, lines 29-33). Yamazaki and Shimizu are combinable because they are concerned with a similar technical field, namely, that of injection molding processes having a heated cylinder and a movable screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the screw backwards after an injection process, as in Yamazaki, in Shimizu's molding process in order to melt and measure the material more efficiently.

Regarding Claim 4, Shimizu shows the basic process as claimed as discussed above, however Shimizu does not explicitly show varations of the synchronization of the screw rotation and linear movement. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary Shimizu's synchronization ratio during his molding process in order to achieve better measuring and melting of the material therein.

Regarding Claim 5, Shimizu shows the basic process as claimed, including controlling an injection molding machine including a heating cylinder and a screw disposed in the heating cylinder (Column 3, lines 46-47), performing a plasticization/measuring process and an injection process (Column 2, line 60), defining a synchronization ratio of a rotation speed of the screw, so that the position of a flight of the screw does not apparently move relative to a constant linear

backward speed of the screw (Column 2, lines 58-65), and defining a rotation speed of the screw by dividing the backward speed of the screw by the pitch of the flight of the screw (Column 2, lines 44-57). The examiner notes that a specific "synchronization ratio" is not explicitly defined in Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized. The examiner also notes that Shimizu does not explicitly define an arbitrary sychronization ratio, as used in the claimed formula. However, since the arbitrary sychronization ratio cannot alter how the process steps are to be performed to achieve the utility of the invention, it is herein addressed as nonfunctional descriptive material (MPEP 2106 VI.). Shimizu does not show moving the screw backwards while rotating it after completion of the measuring process or the injection process. Yamazaki shows that it is known to retract the screw while rotating it (Column 6, lines 29-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the screw backwards after an injection process, as in Yamazaki, in Shimizu's molding process in order to melt and measure the material more efficiently. Furthermore, Shimizu shows the basic process as claimed as discussed above, but does not explicitly show varations of the synchronization of the screw rotation and linear movement. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary

Shimizu's synchronization ratio during his molding process in order to achieve better measuring and melting of the material therein.

Regarding Claim 6, Shimizu shows the basic process as claimed as discussed above, however Shimizu does not explicitly show varations of the synchronization of the screw rotation and linear movement. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary Shimizu's synchronization ratio during his molding process in order to achieve better measuring and melting of the material therein.

Regarding Claim 7, Shimizu shows the basic process as claimed, including a process using a heating cylinder, a screw disposed in a heating cylinder (Column 3, lines 46-47), a first driving source for driving the screw in an axial direction, a second driving source for rotating the screw (Column 4, lines 1-5, 18-27), position detecting means for detecting the axial position of the screw (Column 5, lines 42-51), rotation-speed detecting means for detecting the rotation speed of the screw (Column 4, lines 49-54), and a controller for controlling the first driving source and the second driving source dependent on the detecting signals transmitted from the position detecting means (Column 5, lines 47-51) and the rotation-speed detecting means (Column 4, 60-65). Shimizu also shows a plasticization/measuring process and an injection process (Column 2, line 60), comprising the steps of defining a synchronization ratio of a rotation speed of the screw, so that the position of a flight of the screw does not apparently move

relative to a constant linear backward speed of the screw (Column 2, lines 58-65), and defining a rotation speed of the screw by dividing the backward speed of the screw by the pitch of the flight of the screw (Column 2, lines 44-57). The examiner notes that a specific "synchronization ratio" is not explicitly defined in Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized. The examiner also notes that Shimizu does not explicitly define an arbitrary synchronization ratio, as used in the claimed formula. However, since the arbitrary sychronization ratio cannot alter how the process steps are to be performed to achieve the utility of the invention, it is herein addressed as nonfunctional descriptive material (MPEP 2106 VI.). Shimizu does not show moving the screw backwards while rotating it after completion of the measuring process or the injection process. Yamazaki shows that it is known to retract the screw while rotating it (Column 6, lines 29-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the screw backwards after an injection process, as in Yamazaki, in Shimizu's molding process in order to melt and measure the material more efficiently. Furthermore, Shimizu shows the basic process as claimed as discussed above, but does not explicitly show variations of the synchronization of the screw rotation. However it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary

Shimizu's synchronization ratio during his molding process in order to achieve better measuring and melting of the material therein

Regarding Claim 8, Shimizu shows the basic process as claimed as discussed above, however Shimizu does not explicitly show varations of the synchronization of the screw rotation. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than the backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary Shimizu's synchronization ratio during his molding process in order to achieve better measuring and melting of the material therein.

Regarding Claim 9, Shimizu shows that it is known to control an injection molding machine in order to control the movement of a molten resin in a heating cylinder of the injection molding machine (Column 2, lines 18-26), the injection molding machine including a screw arranged within the heating cylinder to be rotatable and to be linearly movable (Column 2, lines 43-48) and having a flight of pitch P (Column 2, line 51), the molten resin being moved in a forward feeding direction during a plasticization process and an injection process (Column 2, lines 43-65). Shimizu does not show rotating the screw while moving it backwards after completion of the measuring process or the injection process. Yamazaki shows that it is known to retract the screw at a constant backward speed while rotating it at a rotation speed (Column 6, lines 29-33; It is noted that the specific time frame during which "constant speed" occurs is not claimed.). It would have been obvious to one of ordinary skill in the art at the time the invention

was made to move the screw backwards after an injection process, as in Yamazaki, in Shimizu's molding process in order to melt and measure the material more efficiently.

Regarding Claim 10, Shimizu shows the process as claimed as discussed above, including showing that it is known to control an injection molding operation by performing a plasticization/measuring process and an injection process (Column 2, lines 18-26). Shimizu also shows that it is known to define a synchronization ratio of a rotation speed of the screw, so that the position of a flight of the screw does not apparently move relative to a speed of the screw (Column 2, lines 58-65), and to define a rotation speed of the screw by dividing the linear (backward, as in Yamazaki) speed of the screw by the pitch of the flight of the screw (Column 2, lines 44-57). The examiner notes that a specific "synchronization ratio" is not explicitly defined in Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized. It would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary Shimizu's synchronization ratio of the screw's rotation speed and linear speed during his molding process in order to achieve better measuring and melting of the material therein.

Regarding Claim 11, Shimizu shows the process as claimed as discussed above, including showing that it is known to define a rotation speed of the screw by dividing the backward speed of the screw by the pitch of the flight of the screw (Column 2, lines 44-57). Furthermore, the

examiner also notes that Shimizu does not explicitly define a synchronization ratio, as used in the formula in Claim 11. However, since the synchronization ratio of Claim 11 cannot alter how the process steps are to be performed to achieve the utility of the invention, it is herein addressed as nonfunctional descriptive material (MPEP 2106 VI.).

Regarding Claim 12, Shimizu shows the process as claimed as discussed above, including showing that it is known to define a synchronization ratio of a rotation speed of the screw, so that the position of a flight of the screw does not apparently move relative to a speed of the screw (Column 2, lines 58-65). The examiner notes that a specific "synchronization ratio" is not explicitly defined in Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized. It would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary Shimizu's synchronization ratio of the screw's rotation speed and linear speed during his molding process in order to achieve better measuring and melting of the material therein.

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu, in view of Yamazaki.

Regarding Claim 13, Shimizu shows the basic process as claimed, including controlling an injection molding machine including a heating cylinder and a screw disposed in the heating cylinder (Column 3, lines 46-47), moving molten resin in a forward feeding direction during a plasticization/measuring process and an injection process (Column 2, line 60), and rotating the screw in the feeding direction at a rotation speed R (Column 2, lines 45-49) and simultaneously linearly moving the screw at a constant speed V (Column 2, lines 48-51). Shimizu does not show moving the screw backwards while rotating it after completion of the measuring process or the injection process. Yamazaki shows that it is known to retract the screw at a constant backward speed while rotating it (Column 6, lines 29-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the screw backwards after an injection process, as in Yamazaki, in Shimizu's molding process in order to melt and measure the material more efficiently.

Regarding Claim 14, Shimizu shows the process as claimed as discussed in the rejection of Claim 13 above, including a method including controlling rotation speed R in correspondence to position detecting means (Note that by detecting position, speed V of the screw would be indicated. Column 5, lines 43-55). Shimizu does not show moving the screw backwards while rotating it after completion of the measuring process or the injection process. Yamazaki shows that it is known to retract the screw while rotating it (Column 6, lines 29-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the screw backwards after an injection process, as in Yamazaki, in Shimizu's molding process in order to melt and measure the material more efficiently.

Regarding Claim 15, Shimizu shows the process as claimed as discussed in the rejection of Claim 13 above, including a plasticization/measuring process and an injection process (Column 2, line 60), wherein the rotation speed R of the screw is given, by defining a synchronization ratio based on the backward speed of the screw and the pitch of the flight of the screw (Column 2, lines 44-57). The examiner notes that a specific "synchronization ratio" is not explicitly defined in Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized.

Regarding Claim 16, Shimizu shows the process as claimed as discussed in the rejection of Claims 13 and 15 above, including a method wherein the selected rotation speed is given by dividing the backward speed of the screw by the pitch of the flight of the screw (Column 2, lines 44-57). The examiner notes that a specific "synchronization ratio" is not explicitly defined in Shimizu, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized. The examiner also notes that Shimizu does not explicitly define an arbitrary synchronization ratio, as used in the claimed formula. However, since the arbitrary synchronization ratio cannot alter how the process steps are to be performed to achieve the utility of the invention, it is herein addressed as nonfunctional descriptive material (MPEP 2106 VI).

Regarding Claim 17, Shimizu shows the process as claimed as discussed in the rejection of Claims 13 and 15 above, however Shimizu does not explicitly show variations of the synchronization of the screw rotation and linear movement. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that if a

synchronization ratio is less that 100%, the screw is rotated more slowly than the backward speed of the screw (thus dragging resin backward) and that if the synchronization ratio is more than 100%, the screw is rotated faster than then backward speed of the screw (thus feeding resin forward). It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary Shimizu's synchronization ratio of the screw's rotation speed and linear speed during his molding process in order to achieve better measuring and melting of the material therein. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a value of 100% when the screw rotation and linear movement are perfectly synchronized (causing no movement to the resin).

Response to Arguments

Applicant's arguments filed 26 April 2004 have been fully considered but they are not persuasive. The arguments are directed to the claims per the amendment filed 26 April 2004, but the examiner is responding to the arguments since the same references applied in prior office actions are still applicable.

Regarding Claim 9, applicant contends that Imatomi does not disclose "'linearly moving the screw backwards relative to the forward feeding direction of a molten resin at a constant backward speed and simultaneously rotating the screw in the forward feeding direction'". This is not persuasive because there is no evidence in the prior art that the retraction of the screw due to the back pressure of the molten resin is not constant. The arguments of counsel cannot take the place of evidence in the record ("An assertion of what seems to follow from common

experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness." See MPEP 716.01(c) and 2145.

Regarding Claims 1-8, applicant contends that Shimizu and Yamazaki do not teach the claimed invention because they do not teach defining a synchronization ratio using flight position and constant backward speed of the screw. This is not persuasive because the added limitation of "constant" speed in this "defining" step does not alter how the process steps are to be performed to achieve the utility of the invention, and it is herein addressed as nonfunctional descriptive material (MPEP 2106 VI). Furthermore, the added limitation of "constant" speed in the "defining a synchronization ratio" step does not require the screw to move with constant speed in the subsequent method steps.

Regarding Claims 9-17, applicants contend that Shimizu and Yamazaki do not teach the claimed invention because they do not teach rotating the screw in the forward feeding direction at a rotational speed and simultaneously and linearly moving the screw backwards at a constant backward speed. This is not persuasive because there is no evidence in the prior art that Yamazaki's retraction of the screw due to the back pressure of the molten resin is not constant. The arguments of counsel cannot take the place of evidence in the record ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness." See MPEP 716.01(c) and 2145.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A Fontaine whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maf
May 24, 2004

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER